

## Donna Kuethe

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**From:** Travis Olson <travis.olson@romtec.com>  
**Sent:** Tuesday, June 09, 2015 6:36 PM  
**To:** 'Donna Kuethe'  
**Cc:** Nannette Sibley; Kris Lamar  
**Subject:** RE: Donna Kuethe - Moulton Borough  
**Attachments:** Vault Spec Sheet 750 & 1000 gallon.pdf; Maintenance on a vault.pdf; Ventilation.pdf

Donna,

Thank you for your email this morning. I have responded to your questions below to help you out with your presentation to the Capital Improvements Committee.

1. What would be our operation/maintenance costs? – i.e. pumping, cleaning etc. for a single bathroom) – just ballpark figures if you have them.
  - a. We do not have any estimates for the annual operation/maintenance costs, however can provide you with information to help you get the answers needed from your own maintenance department and pumping services based on the amount of use you anticipate for these buildings. I have included the cut sheets for the vaults that includes the approximate number of uses each size vault will handle before pumping services are needed. I have also included our standard Maintenance on a vault document as a reference.
2. What kind of site work would we need to do in preparation for installing a toilet?
  - a. I have attached the vault installation details for reference to help answer this question. The site work would include excavating and setting the vault, backfilling and pouring the foundation, and either setting or erecting the building (depending on if you choose our prefabricated options (SST Original or SST Traditional Models) or cmu block buildings (SST Aspen Models)).
3. “Isn’t this just a glorified chemical toilet?”
  - a. Our waterless restroom buildings have been referred to as glorified honey buckets, however these are actually a more permanent solution for sites without utilities to connect to. Also, they do not use “chemicals”, they are instead charged with approximately 10”-12” of water to help the ventilation system function properly.
4. “Won’t you still be dealing with the smell and the hand sanitizer?”
  - a. Romtec waterless restroom buildings utilize the “SST Ventilation System” to help keep odors down in these units. I have attached a diagram that shows the natural air-flow through the building, down the vaults, and out the vent stacks.
  - b. Hand sanitizers are used in lieu of sinks on the waterless units. This is something you will want to account for in your maintenance budget for these units.

In regards to contacts with municipal parks and recreation in New England that have purchase Romtec waterless bathrooms, I only found one from recently and their building has been in use since 2012. I have included the original contact for that project below for your use, however I am unsure if he is still there...

Dan Pereira  
Lincoln Parks & Recreation Department (MA)  
P: 781-259-0784  
[dpereira@lincnet.org](mailto:dpereira@lincnet.org)

I hope this information is helpful. Please let me know if I can provide you with anything else!

# ROMTEC

SST Waterless Restrooms

Design

Engineering

Construction Services

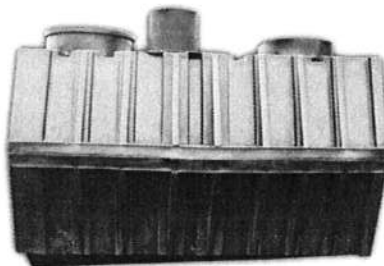
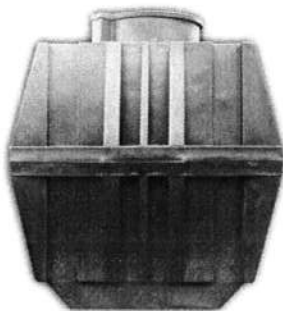
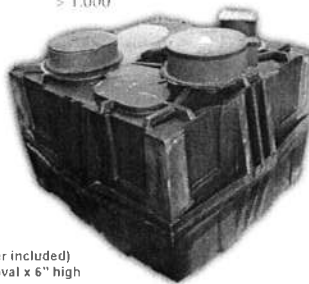
## VAULT SPECIFICATIONS

Patented Design  
Materials

US Patent No. 4231482  
Reinforced LLDPE - Polyethylene

	ASTM TEST	NOM. VALUE
DENSITY	D-4583	0.938 G/CM <sup>3</sup>
TENSILE STRENGTH AT YIELD	D-638	3,000 PSI
ELONGATION AT BREAK	D-638	> 1,000
TENSILE MODULUS OF ELASTICITY	D-638	80,000 PSI
FLEXURAL MODULUS	D-790	112,000 PSI
HEAT DEFLECTION TEMP @ 66PSI	D-648	144 DEG. F
VICAT SOFTENING TEMP	D-1525	248 DEG. F
IMPACT STRENGTH @ -40DEG.C	ARM STD.	70 FT. LB. 190 MIL
ENVIR. STRESS CRACK RESISTANCE	D-1693	> 1,000

Material Thickness:	3/8" average
Mid-point Dimensions:	750 gal: 84" x 64" 1,000 gal: 78" x 78"
Volume/usage:	750 gallon/11,000 uses (approx) 1,000 gallon/15,000 uses (approx)
Weight:	750: 340 lbs; 1,000: 450 lbs.
Fittings:	Cleanout: 24" dia. x 6 1/2" high (cover included) Riser Stack: 20- 5/8" x 16-1/2" o.d. oval x 6" high Vent Stack: 12" o.d. x 6-1/2" high





## **CLEAN UP AND MAINTENANCE**

### **Romtec Split-Face Block Buildings**

#### **Maintenance**

Periodic maintenance of the interior surfaces is easily accomplished with water and a clean rag, or any cleaning solutions you prefer. Clean inside the building regularly to minimize odors.

The wall vents and vent pipes must be kept clear of debris to assure proper air flow and minimize odors inside the building. The SST ventilation design causes pressure inside the building, which forces the air out the vent pipe. This is aided by air passing over the top of the open vent pipe, creating negative pressure at the top of the pipe. Any debris in the vents can reduce the venting of the building.

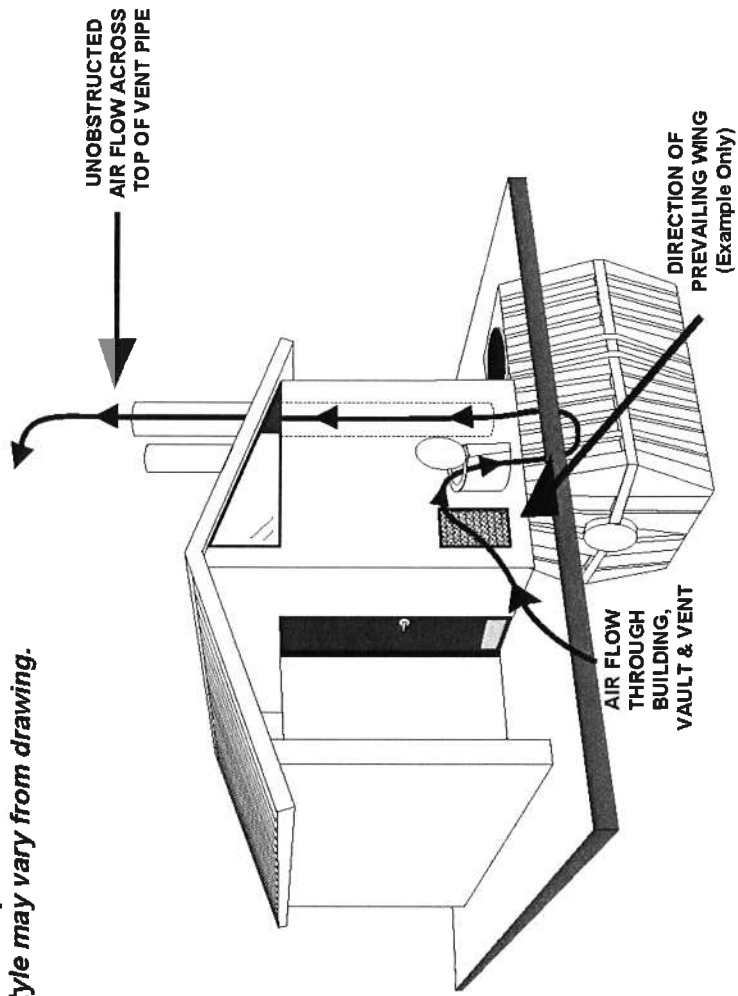
#### **Vault Cleaning**

The 1000 gallon vaults are each designed for approximately 14,000 uses and should be cleaned out accordingly. The slope at the bottom of the vault is designed to aid in pumping the vault.

To clean out the vaults:

1. Remove the sewage cleanout covers behind the building and use a suction hose to remove the waste from the vaults.
2. Use the pumper truck's pressure water system to wash down the walls inside the vaults and dilute any remaining waste, then use the suction hose to remove the last remaining waste from the vaults.
3. Place at least one foot of water (100 gallons) in the vaults after cleaning. This helps to reduce odors and aids in cleaning.

**Ventilation Requirements**  
*Building style may vary from drawing.*



**Figure 2**

The following list of maintenance items are things that can be checked regularly depending on usage:

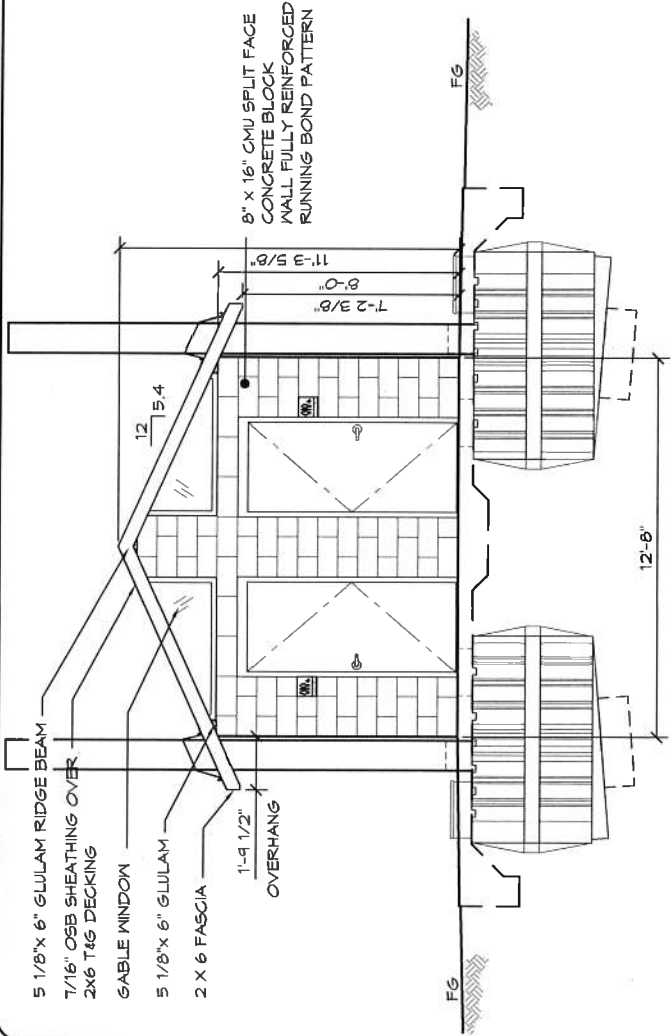
- Check locks and doors regularly to ensure proper functioning and that someone cannot be accidentally locked inside of the restroom.
- Lubricate door hinges yearly.
- Clean Romtec risers, seats, and lids with your choice of cleaners, for sanitation as well as reducing odors, as needed per usage; daily, weekly or monthly.



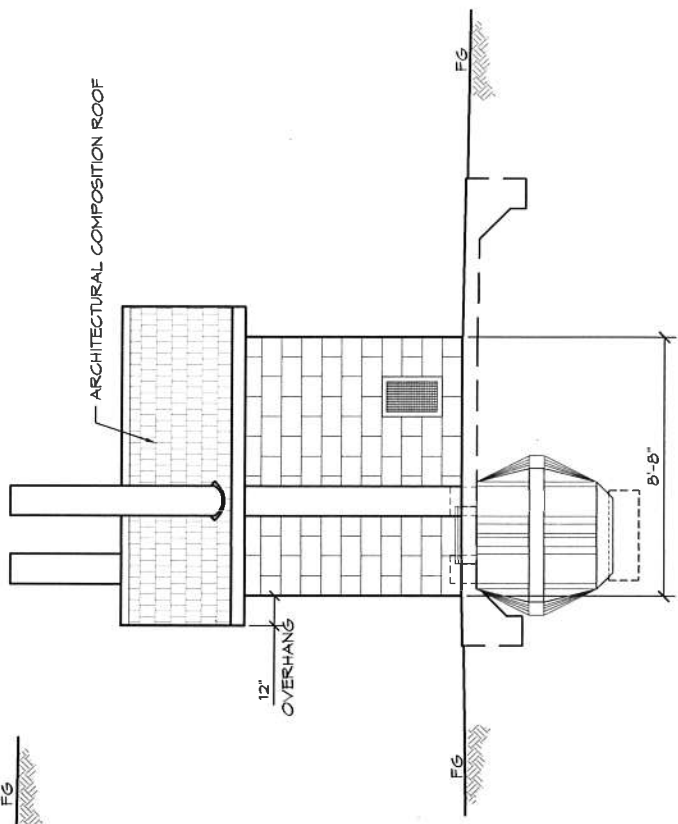
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**1 SOUTH ELEVATION**  
 SCALE: 1/4" = 1'-0"



**2 WEST ELEVATION**  
 SCALE: 1/4" = 1'-0"





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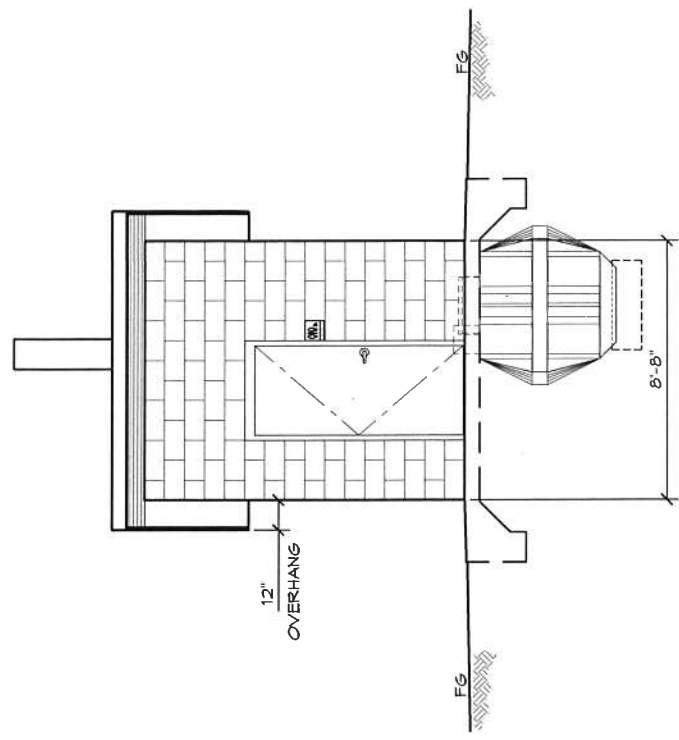
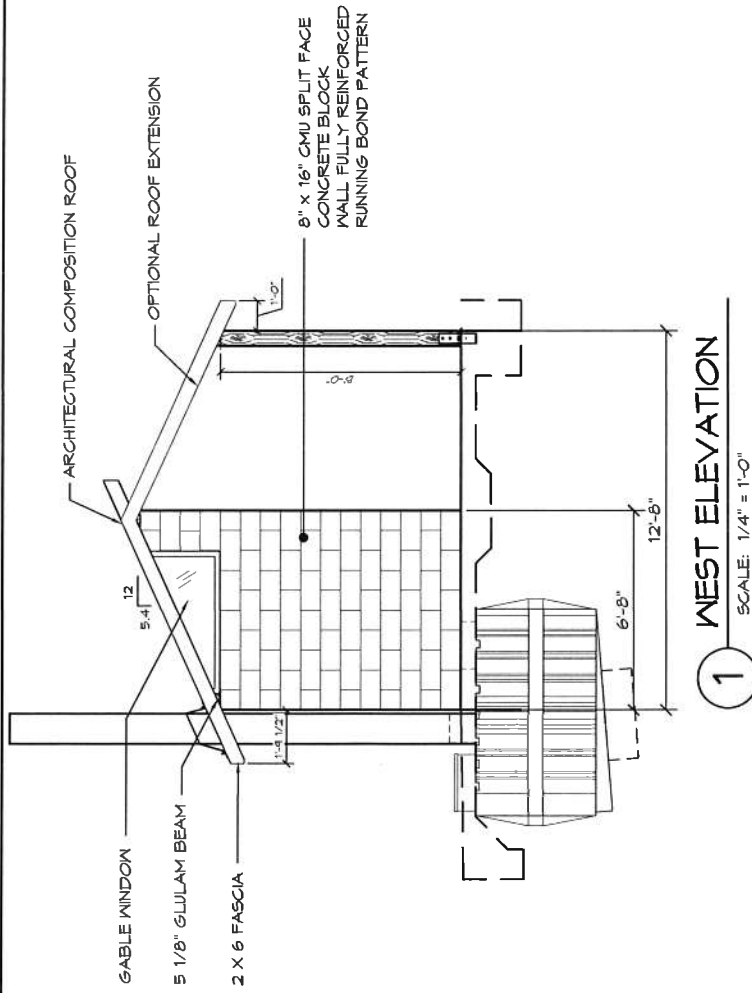








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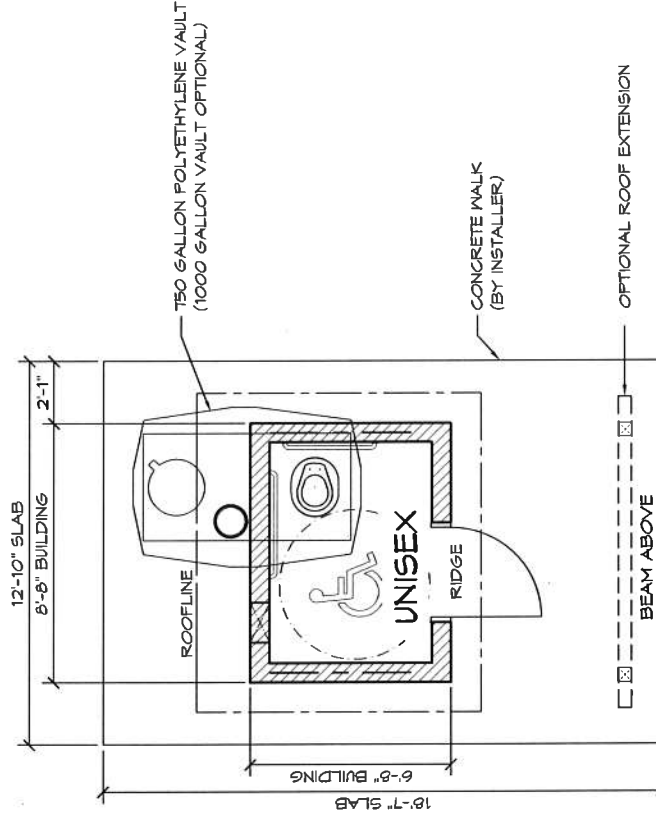




LEGEND		
SYMBOL	DESCRIPTION	AREA/ QUANTITY
---	GABLE WINDOW	2
	16" x 24" KICKPROOF WALL VENT	1

## WALL TYPE SCHEDULE

	8" CMU WALL REINFORCED & GROUT FILLED
	6" CMU WALL REINFORCED & GROUT FILLED



## 1 FLOOR PLAN

SCALE: 1/4" = 1'-0"



PLAN NORTH

**ROMTEC**

18240 NORTH BANK ROAD - ROSEBURG, OR 97470

(503) 496-3541 FAX (503) 496-0603

PRELIMINARY

2015 ROMTEC, INC. ALL RIGHTS RESERVED. THESE PLANS AND DRAWINGS MAY NOT BE REPRODUCED, ADAPTED OR FURTHER DISTRIBUTED, AND NO BUILDINGS MAY BE CONSTRUCTED FROM THESE PLANS, WITHOUT THE WRITTEN PERMISSION OF ROMTEC, INC.

PROJECT: 1011 99T ASPEN SINGLE RESTROOM

CUSTOMER  
PROJECT  
LOCATION

SHEET TITLE: FLOOR PLAN

PROJECT#:	XXXX
MODEL#:	1011
DATE:	01/26/15
REVISIONS	
REV.	DATE

SHEET NO. 1